ODS 784

OBSTRUCTION DATA SHEET

ODS 784
LUIZ MUNOZ MARIN INTERNATIONAL AIRPORT
SAN JUAN, PUERTO RICO

DIGITIZED FROM

OC 784
SURVEYED FEBRUARY 1989
6TH EDITION

PREPARED AND DISTRIBUTED BY
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OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)

2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

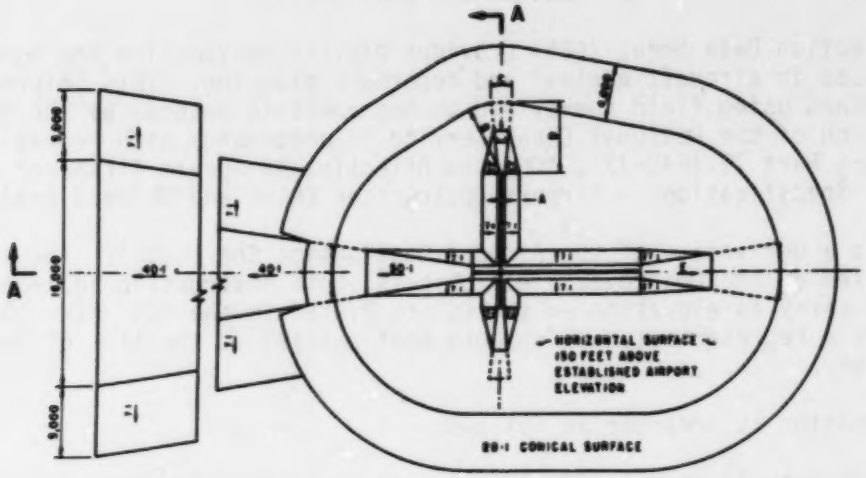
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway - nonprecision instrument approach with visibility minimums as low as 3/4 mile
PIR ..... Precision instrument runway
SUPLC ... Supplemental C underlying a B(V)

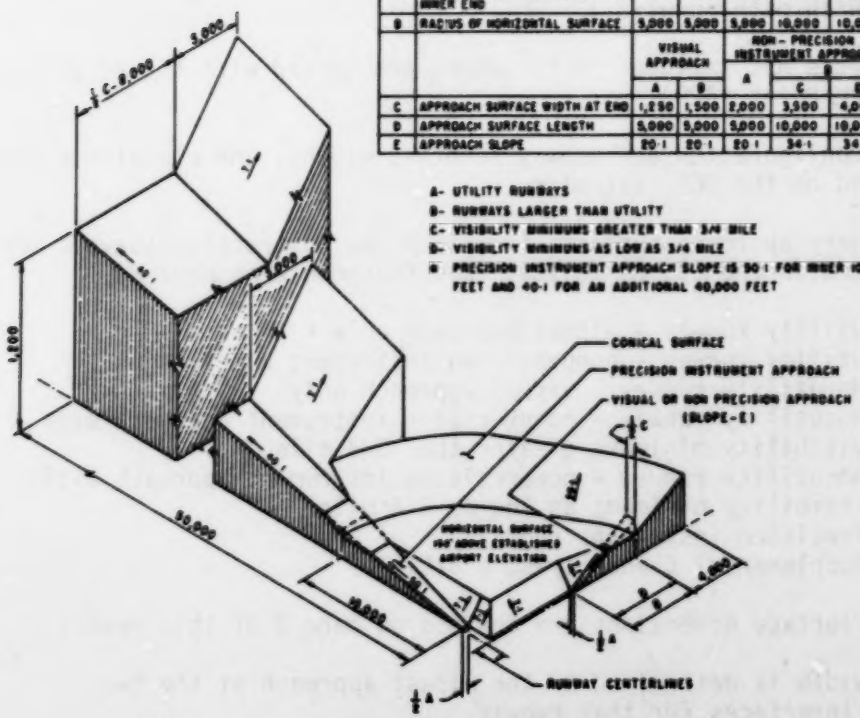
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
					C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A- UTILITY RUNWAYS
B- RUNWAYS LARGER THAN UTILITY
C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

FAR-77 CIVIL AIRPORT IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X[1] X[2] XXXX/XXXX[3] XXXXXX.XXX[4] XXXXXXX.XXX[4] XXXXXXX[5] XXXX/XXXX[6] XXXXXX.XXX[7] XXXXXXX.XXX[7]

OBJECT	LAT	LONG	A[8]	ELEV[9]	AGL[10]	HAR[11]	HAT[11]	HAA[11]	DEND[12]	DTHR[12]	DCLN[12]	PNTR[13]
XXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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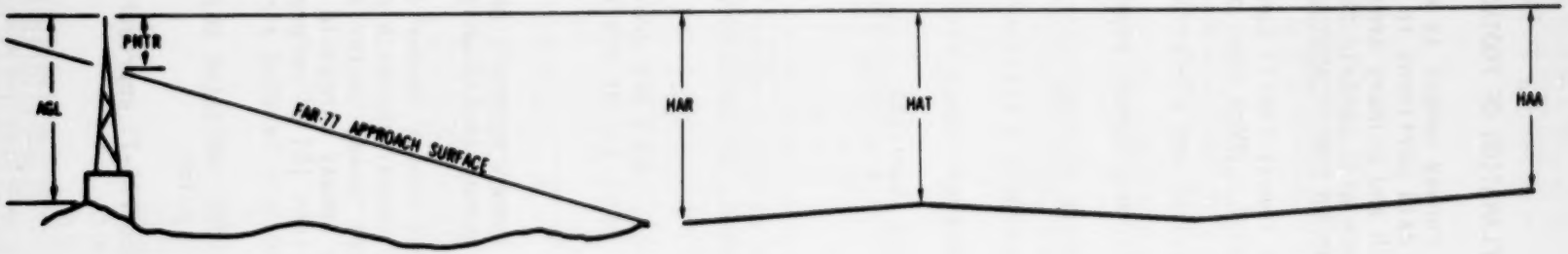

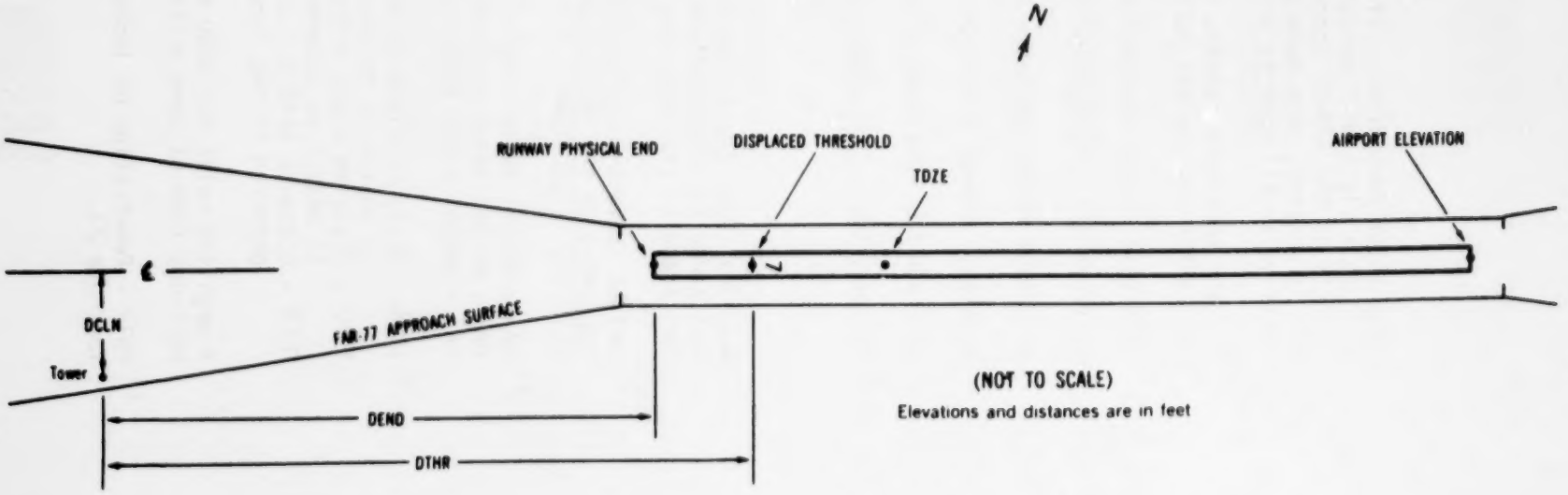

(NOT TO SCALE)

Elevations and distances are in feet

EXPLANATION OF FOOTNOTES

[1] Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.

[2] For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)

[3] Reference runway approach physical end elevation/touchdown zone elevation

[4] Latitude and longitude of reference runway approach physical end

[5] Reference runway geodetic azimuth reckoned clockwise from south

[6] Reference runway displaced threshold elevation/touchdown zone elevation

[7] Latitude and longitude of reference runway displaced threshold

[8] Accuracy Code:

Horizontal	Vertical
1 = 20	A = 2
2 = 40	B = 5
	C = 20

[9] Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.

[10] Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ±10 feet.

[11] HAA - Height above airport
HAR - Height above reference runway approach physical end
HAT - Height above reference runway touchdown zone elevation

[12] DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.

A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.

[13] PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

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AIRPORT ELEVATION 10

8 PIR 8/10 182626.671N 0660054.913W 2465915

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	182702.83	0655917.10	1A	49		41	39	39	-10093		324R	42
TREE	182708.16	0655919.85	1A	41		33	31	31	-10060		275L	34
TREE	182707.37	0655922.01	1A	45		37	35	35	-9837		283L	38
TREE	182701.79	0655920.99	1A	35		27	25	25	-9707		274R	28
TREE	182704.25	0655929.54	1A	42		34	32	32	-9046		277L	35
TREE	182658.78	0655928.16	1A	47		39	37	37	-8953		284R	40
BUSH	182657.20	0655932.87	1A	28		20	18	18	-8474		253R	21
TREE	182659.88	0655941.40	1A	63		55	53	53	-7823		317L	56
TREE	182658.62	0655948.25	1A	123		115	113	113	-7167		458L	115
TREE	182654.06	0655955.59	1A	58		50	48	48	-6337		310L	50
TREE	182653.68	0660000.30	1A	125		117	115	115	-5905		452L	117
TREE	182649.90	0660009.82	1A	132		124	122	122	-4912		459L	124
TREE	182643.52	0660024.18	1A	134		126	124	124	-3388		407L	124
TREE	182642.32	0660024.02	1A	71		63	61	61	-3354		290L	61
TREE	182638.44	0660039.18	1A	134		126	124	124	-1858		501L	125
OL ON GLIDE SLOPE	182634.20	0660046.98	1A	45		37	35	35	-1000		400L	36
OL ON WINDSOCK	182632.79	0660046.50	1A	30		22	20	20	-987		252L	21
POLE	182622.18	0660112.70	1A	39		31	29	29	1753		253L	0
TREE	182626.10	0660116.53	1A	52		44	42	42	1938		761L	9
TREE	182611.69	0660114.73	1A	61		53	51	51	2347		645R	10
TREE	182609.80	0660117.58	1A	68		60	58	58	2674		713R	11
TREE	182622.50	0660123.53	1A	72		64	62	62	2700		690L	14
TREE	182620.96	0660127.49	1A	82		74	72	72	3111		696L	16
TREE	182616.99	0660128.48	1A	65		57	55	55	3356		365L	-6

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AIRPORT ELEVATION 10

26 C 7/8 182705.428N 0655919.288W 0665945

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	182632.79	0660046.50	1A	30		23	22	20	-9015		252R	21
OL ON GLIDE SLOPE	182634.20	0660046.98	1A	45		38	37	35	-9002		400R	36
TREE	182638.44	0660039.18	1A	134		127	126	124	-8143		501R	125
TREE	182642.32	0660024.02	1A	71		64	63	61	-6647		290R	61
TREE	182643.52	0660024.18	1A	134		127	126	124	-6614		407R	124
TREE	182649.90	0660009.82	1A	132		125	124	122	-5090		459R	124
TREE	182653.68	0660000.30	1A	125		118	117	115	-4097		452R	117
TREE	182654.06	0655955.59	1A	58		51	50	48	-3665		310R	50
TREE	182658.62	0655948.25	1A	123		116	115	113	-2835		458R	115
BUSH	182659.88	0655941.40	1A	63		56	55	53	-2179		317R	56
TREE	182657.20	0655932.87	1A	28		21	20	18	-1528		253L	21
TREE	182658.78	0655928.16	1A	47		40	39	37	-1048		284L	40
TREE	182704.25	0655929.54	1A	42		35	34	32	-955		277R	35
TREE	182701.79	0655920.99	1A	35		28	27	25	-294		274L	28
TREE	182707.37	0655922.01	1A	45		38	37	35	-165		283R	38
TREE	182708.16	0655919.85	1A	41		34	33	31	58		275R	34
TREE	182702.83	0655917.10	1A	49		42	41	39	91		324L	42
BUSH	182710.03	0655918.78	1A	34		27	26	24	226		408R	26
TREE	182703.23	0655915.15	1A	15		8	7	5	280		360L	6
OL ON BUILDING	182702.16	0655913.62	1A	54		47	46	44	374		516L	42
TREE	182705.74	0655911.71	1A	18		11	10	8	684		256L	-3
	182721.42	0655844.68	1A	111		104	103	101	3697		183R	1

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AIRPORT ELEVATION 10

10 PIR 9/9 182607.972N 0660050.829W 2700830

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	182604.65	0655925.69	1A	56		47	47	46	-8198		315R	47
BUSH	182612.65	0655926.66	1A	22		13	13	12	-8102		492L	13
TREE	182604.53	0655927.45	1A	60		51	51	50	-8029		326R	51
TREE	182604.59	0655933.10	1A	60		51	51	50	-7484		322R	51
TREE	182604.12	0655940.88	1A	70		61	61	60	-6736		372R	61
TREE	182604.46	0655946.75	1A	69		60	60	59	-6171		338R	60
TREE	182604.57	0655954.90	1A	69		60	60	59	-5386		330R	60
TREE	182603.36	0660012.18	1A	67		58	58	57	-3723		455R	58
TREE	182604.48	0660030.56	1A	68		59	59	58	-1952		348R	59
OL ON WINDSOCK	182610.25	0660035.68	1A	26		17	17	16	-1458		234L	17
TREE	182604.63	0660036.16	1A	56		47	47	46	-1413		334R	47
ROD ON OL GLIDE SLOPE	182604.72	0660040.45	1A	53		44	44	43	-1000		325R	44
TREE	182602.83	0660046.22	1A	49		40	40	39	-445		518R	40
TREE	182603.38	0660053.64	1A	59		50	50	49	269		464R	49
TREE	182612.28	0660057.47	1A	33		24	24	23	641		433L	15
TREE	182601.81	0660102.10	1A	84		75	75	74	1084		624R	57
TREE	182603.65	0660106.27	1A	61		52	52	51	1485		440R	26
TREE	182602.56	0660106.41	1A	72		63	63	62	1499		550R	37
TREE	182611.69	0660114.73	1A	61		52	52	51	2302		369L	10
TREE	182609.80	0660117.58	1A	68		59	59	58	2576		178L	11
TREE	182604.91	0660118.31	1A	58		49	49	48	2645		316R	0
TREE	182616.99	0660128.48	1A	65		56	56	55	3627		901L	-13

AIRPORT ELEVATION 10

28 SUPLC 9/9 182607.770N 0655927.568W 0900856

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	182602.83	0660046.22	1A	49		40	40	39	-7572		518L	40
ROD ON OL GLIDE SLOPE	182604.72	0660040.45	1A	53		44	44	43	-7016		325L	44
TREE	182604.63	0660036.16	1A	56		47	47	46	-6603		334L	47
OL ON WINDSOCK	182610.25	0660035.68	1A	26		17	17	16	-6559		234R	17
TREE	182604.48	0660030.56	1A	68		59	59	58	-6064		348L	59
TREE	182603.36	0660012.18	1A	67		58	58	57	-4294		455L	58
TREE	182604.57	0655954.90	1A	69		60	60	59	-2631		330L	60
TREE	182604.46	0655946.75	1A	69		60	60	59	-1846		338L	60
TREE	182604.12	0655940.88	1A	70		61	61	60	-1280		372L	61
TREE	182604.59	0655933.10	1A	60		51	51	50	-532		322L	51
TREE	182604.53	0655927.45	1A	60		51	51	50	12		326L	51
BUSH	182612.65	0655926.66	1A	22		13	13	12	86		492R	13
TREE	182604.65	0655925.69	1A	56		47	47	46	182		315L	47
TREE	182612.01	0655925.24	1A	28		19	19	18	223		428R	18
BUSH	182611.67	0655921.86	1A	22		13	13	12	549		395R	3
BUSH	182610.97	0655920.42	1A	26		17	17	16	688		324R	3
TREE	182603.05	0655917.60	1A	56		47	47	46	961		474L	25
TREE	182614.08	0655913.94	1A	41		32	32	31	1311		640R	-1
TREE	182606.66	0655908.79	1A	54		45	45	44	1808		107L	-2
TREE	182604.08	0655907.63	1A	59		50	50	49	1920		368L	-1
TREE	182605.09	0655906.82	1A	61		52	52	51	1998		265L	-1
TREE	182607.88	0655904.87	1A	65		56	56	55	2185		16R	-2

OC0784

AIRPORT ELEVATION 10

ARP 182629.065N 0660008.035W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
OL ON HANGAR	182636.34	0660004.29	1A	59		49	37 23	817
APBN AND ANT ON OL CTL TR	182628.18	0660019.35	1A	125		115	276 31	1093
BOX	182639.94	0660007.61	1A	13		3	13 21	1098
BUSH	182613.39	0660004.18	1A	16		6	177 59	1624
ROD ON OL ANEMOMETER	182614.56	0660024.33	1A	37		27	238 12	2146
BUSH	182645.40	0655952.28	1A	29		19	53 50	2239
BUSH	182613.31	0655949.72	1A	24		14	143 13	2374
FLOODLIGHT	182616.57	0660030.68	1A	64		54	251 10	2518
TREE	182642.42	0660033.89	1A	136		126	309 37	2830
POLE	182600.96	0660008.45	1A	63		53	192 1	2835
ANTENNA ON OL BUILDING	182641.86	0655941.38	1A	79		69	74 30	2872
BUSH	182613.43	0655941.65	1A	24		14	133 2	2990
ANTENNA ON BUILDING	182643.06	0660038.43	1A	146		136	306 58	3250
TREE	182642.63	0660039.77	1A	162		152	305 20	3348
POLE	182600.78	0660026.29	1A	61		51	222 50	3351
STACK ON OL BUILDING	182555.92	0660001.11	1A	124		114	179 56	3409
BUSH	182624.30	0660043.51	1A	19		9	273 12	3449
TREE	182650.71	0655939.53	1A	51		41	62 42	3507
TREE	182618.19	0660044.01	1A	67		57	263 38	3633
TREE	182614.90	0660043.23	1A	33		23	258 20	3677
TREE	182613.92	0655932.37	1A	51		41	125 11	3759
TREE	182636.15	0660046.62	1A	131		121	292 6	3783
STACK ON OL BUILDING	182551.45	0655959.19	1B	167		157	178 33	3889
TREE	182613.39	0655930.19	1A	37		27	124 39	3972
TREE	182614.70	0660046.84	1A	38		28	260 0	4007
TREE	182618.11	0660048.52	1A	68		58	265 22	4051
ANTENNA ON OL BUILDING	182559.97	0655938.65	1A	94		84	147 15	4077
TREE	182701.84	0655942.15	1A	133		123	48 12	4140
TREE	182613.52	0660048.50	1A	48		38	259 16	4200
TREE	182602.61	0660042.51	1A	49		39	242 24	4259
TREE	182621.56	0660052.36	1A	37		27	271 8	4334
TREE	182613.37	0655925.02	1A	46		36	122 7	4433
TREE	182633.55	0660054.82	1A	78		68	286 56	4527

AIRPORT ELEVATION 10

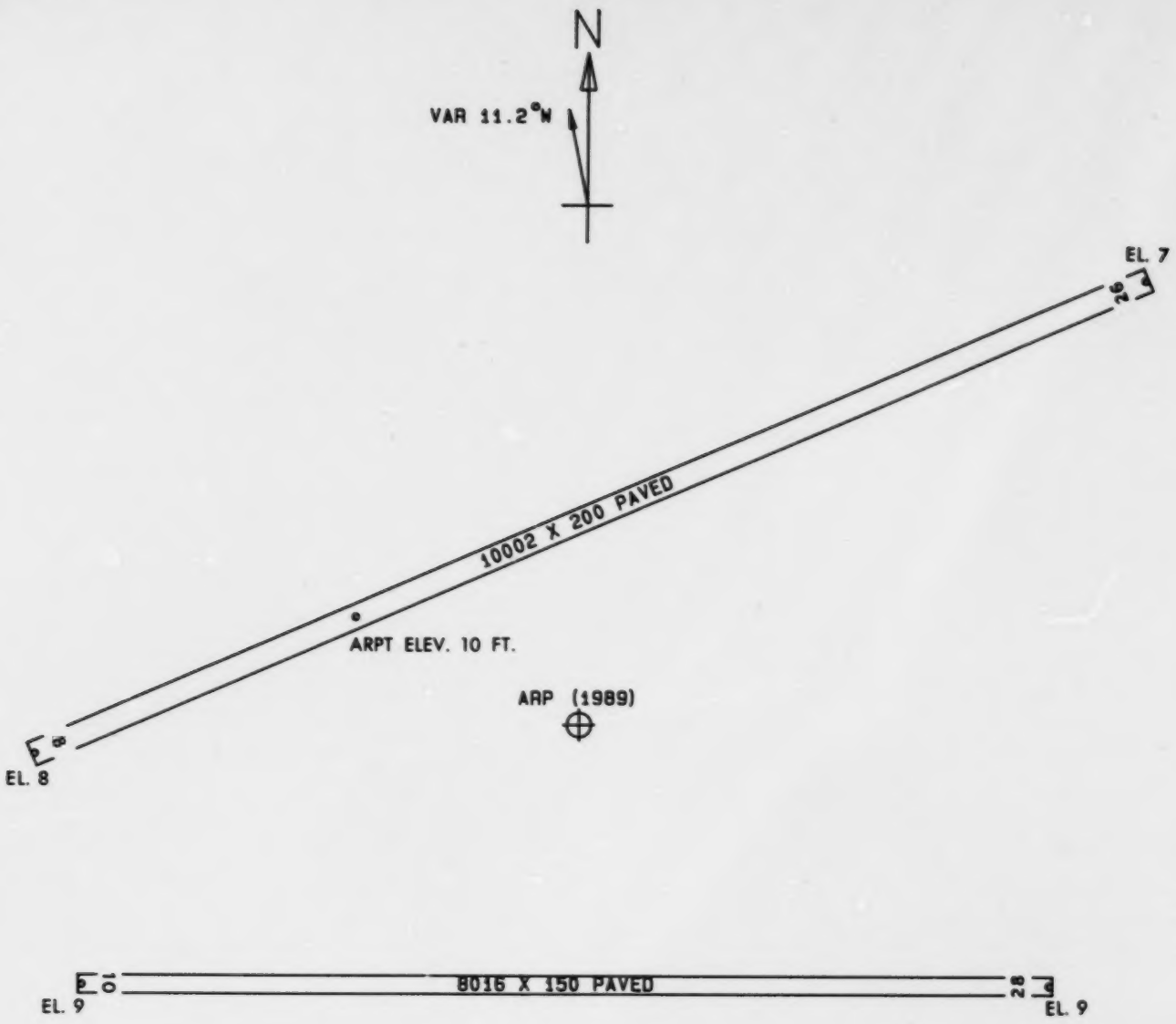
ARP 182629.065N 0660008.035W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	182632.12	0660056.03	1A	58		48	285 1	4631
TREE	182615.93	0660054.19	1A	71		61	264 36	4657
TREE	182620.13	0660055.82	1A	25		15	270 7	4688
TREE	182614.57	0660055.83	1A	42		32	263 34	4829
POLE	182601.74	0660049.24	1A	63		53	246 25	4831
TREE	182614.39	0660057.98	1A	30		20	264 5	5031
POLE	182601.91	0660055.72	1A	63		53	250 23	5346
TREE	182630.98	0660103.85	1A	62		52	283 15	5377
TREE	182637.76	0660103.27	1A	126		116	290 34	5390
LIGHT STANDARD	182614.67	0660103.14	1A	36		26	265 54	5500
STACK ON OL BUILDING	182648.88	0660101.82	1A	212	203	202	302 18	5551
OL ON BUILDING	182651.47	0660101.03	1B	203		193	305 6	5581
ROD ON ASR	182713.88	0655929.93	1A	84		74	50 16	5821
ANTENNA ON OL BUILDING	182554.74	0660057.16	1A	134		124	245 0	5862
ANTENNA ON OL BUILDING	182637.13	0660108.56	1A	163		153	289 9	5884
STADIUM LIGHT	182558.19	0660101.45	1A	92		82	250 0	6012
TREE	182700.91	0655914.19	1A	55		45	69 25	6098
ANTENNA ON OL BUILDING	182548.74	0660055.68	1B	161		151	239 38	6130
TREE	182711.65	0655921.31	1A	80		70	57 31	6220
TREE	182627.34	0660113.11	1A	52		42	279 37	6267
ANTENNA ON OL BUILDING	182642.35	0660115.04	1A	212	200	202	292 56	6588
TREE	182559.93	0660109.34	1A	69		59	254 44	6593
ANTENNA ON OL BUILDING	182535.43	0655919.55	1B	172		162	150 25	7146
ANTENNA ON OL BUILDING	182642.25	0660126.76	1B	203		193	291 9	7695
TREE	182721.27	0655903.12	1A	77		67	61 5	8172
ANTENNA ON BUILDING	182634.17	0660133.14	1B	205		195	284 48	8210
TREE	182723.30	0655857.49	1A	94		84	62 21	8720
ANTENNA ON OL BUILDING	182646.16	0660140.84	1B	203		193	292 8	9099
STACK ON BUILDING	182655.30	0660202.01	1B	202		192	294 46	11287
STACK ON OL BUILDING	182434.73	0660042.69	1B	189		179	207 20	12006
BUILDING	182703.83	0660215.09	1A	254	247	244	297 12	12724
ANTENNA ON OL BUILDING	182421.31	0660051.72	2C	201		191	209 17	13555
ANTENNA ON OL BUILDING	182434.57	0655846.69	2C	226		216	157 3	13954

AIRPORT ELEVATION 10

ARP 182629.065N 0660008.035W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
STACK ON OL BUILDING	182505.68	0660206.53	1B	191		181	244 48	14175
ANTENNA ON OL BUILDING	182422.19	0655902.21	2C	235		225	164 51	14281
ANTENNA ON BUILDING	182421.34	0660154.36	2C	258		248	229 41	16455



TOUCHDOWN ZONE RUNWAY	ELEVATION
8	10
26	8
10	9
28	9

LUIS MUNOZ MARIN INTERNATIONAL AIRPORT

SAN JUAN, PUERTO RICO

(NOT TO SCALE)